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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---|---|
| 10/813,165 | 03/31/2004 | Denis Babin | MMID 2942 | 4469 |
| <div>54334 7590 10/17/2007</div> <div>MOLD-MASTERS LIMITED</div> <div>233 ARMSTRONG AVENUE</div> <div>INTELLECTUAL PROPERTY DEPARTMENT</div> <div>GEORGETOWN, ON L7G-4X5</div> <div>CANADA</div> | | | | |
| | | | <div>EXAMINER</div> <div>BODAWALA, DIMPLE N</div> | |
| | | | <div>ART UNIT</div> <div>1791</div> | <div>PAPER NUMBER</div> |
| | | | <div>MAIL DATE</div> <div>10/17/2007</div> | <div>DELIVERY MODE</div> <div>PAPER</div> |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|--|---|---|--|
| <p align="center">Office Action Summary</p> | <p>Application No.</p> <p align="center">10/813,165</p> | <p>Applicant(s)</p> <p align="center">BABIN, DENIS</p> | |
| | <p>Examiner</p> <p align="center">Dimple N. Bodawala</p> | <p>Art Unit</p> <p align="center">1791</p> | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 August 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 and 17-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☒ Claim(s) 1-12 and 17-19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>8/10/2007</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

Claims 1-12 and 17-19 are pending.

Claims 13-16 are cancelled.

In view of amendment filed on August 10, 2007 following rejections are withdrawn as of reason of record from the previous office action, mailed on May 11, 2007.

- Rejection of claims 1,3,7,9,11-12 and 17-19 under 35 U S C 102(b) as being anticipated by Dewar et al. (U S Patent No. 6,348,171).
- Rejection of claims 1-3 and 5-12 under 35 U S C 102(e) as being anticipated by Olaru et al. (U S Patent No. 7,182,893).
- Rejection of claims 4 and 17-19 under 35 U S C 103(a) as being unpatentable over Olaru et al. (U S Patent No. 7,182,893) in view of Dray, Sr. (U S Patent No. 6,413,076).

Response to Arguments

1. Applicant's arguments with respect to claims 1 and 17 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1-3, 5-12 and 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Olaru (U S Patent No. 7,182,893) in view of Taylor (U S Patent No. 4,394,117).

4. Olaru ('893) discloses the injection molding apparatus which comprises the injection molding machine (10) including a machine nozzle for injecting a melt stream (See coi.2 lines 32- 34), and a machine platen (figures 1 and 2); a manifold (12) having a melt inlet (18) and a melt channel (22) for distributing the melt stream (See coi.2 lines 31-40); and an anti-drool mechanism disposed within the machine platen (See figure i) which comprises a melt passage (30), a valve pin (11) disposed within the melt passage (30) and sized so that the melt stream flows around the pin (See col.1 lines 45-47; and coi.3 lines 58-61), pin (11) having the head portion (55) configured to be received within the machine nozzle (See figure 1); and an actuated shut-off collar (38) disposed at least partially within the melt passages (30) and surrounding the pin (11), the shut off collar (38) and the head portion (55) of the pin (11)

configured to control the flow of the melt stream through the melt passage (30) (See coi.3 lines 1-15).

5. It further teaches that the shut off collar (38) is spring loaded (See figure 1), where in the shut off collar (38) is mechanically actuated when the pinhead portion (55) is received within the machine nozzle (See figure I, coi.3 lines 35-43). It further teaches that the shut off collar (38) is actuated using anyone of a hydraulic, electromechanical and mechanical apparatus (See coi.4 lines 25-27; coi.5 lines 66-67; and coi.6 lines 42-46). It further teaches that the injection molding apparatus (i0) comprises the machine nozzle, which is not shown in the figure but discloses by the specification, thus inherently it also teaches about the locating ring configured to allow the machine nozzle to pass there through and to guide the movement of the shut-off collar (38) as recited in claim 6. Figure 7 teaches that the melt passage (30) is divided into multiple melt passages (301, and 302) to the manifold (12) melt inlet (18). It further teaches that the machine nozzle injects the melt stream into a cold runner system (37) (See coi.2 lines 52-57) .

6. Olaru ('893) discloses all the claimed structural limitations as discussed above, but fails to teach or suggest a valve pin is fixed pin and the shut-off collar and the sprue busing.

7. in the analogous art, Taylor discloses an injection molding machine which comprises anti-drool mechanism to prevent the flow of the molten material into the cavity (See col.3 lines 61-63) by having a fixed pin disposed within the melt passage and sized so that the melt stream flow around the pin, the pin having a head portion configured to be received within the machine nozzle (See figure 2). It further comprises a moveable shut-off collar disposed within the passage and surrounding the pin, the collar and head portion configured to control the flow of the stream through the melt passage (See col.6 lines 15-27). It further comprises a sprue bushing (54) disposed between the nozzle and manifold, wherein the sprue bushing having a melt passage that is in fluid communication with the inlet (See figure 2, abstract).

8. It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify the invention of Olaru by providing the collar and pin because such an alignment is involved to control the flow of the melt stream through the passage as suggested by Taylor.

9. It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify the invention of Olaru by providing the sprue bushing because such an alignment is involved to provide heated flow path for passage of molten material toward a stationary dispersion head positioned centrally within the cavity (See abstract) as suggested by Taylor.

10. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Olaru (U S Patent No. 7,182,893) in view of Taylor (U S Patent No. 4,394,117) as applied to claims 1-3, 5-12 and 17-19 above, and further in view of Dray, Sr. (U S Patent No. 6,413,076).

11. Olaru ('893) discloses all claimed structural limitations as discussed above, but does not disclose the pneumatic actuator.

12. In the analogous art, Dray, Sr. ('076) discloses the injection molding apparatus which comprises the injection units such as nozzle, which mates with a depression formed in a portion of the mold, which is called the sprue bushing (17), wherein the sprue bushing (17) is disposed partially within the machine platen, and having the a melt passage that is in fluid communication with the manifold inlet (See col.1 lines 26-30, 55-60; coi.3 lines 25-63). It further teaches that the shut-off collar is actuated using a pneumatic, mechanical and hydraulic apparatus (actuators) (See coi.2 lines 14-17).

13. It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to modify the invention of Olaru ('893) with the sprue bushing and the pneumatic actuator because pneumatic actuator involves to control the shut-off valve which is used to halt or stop material

flow from an injection unit into the mold portion of the injection molding apparatus (See col.1 lines 7-10) as suggested by Dray, Sr. ('076).

Conclusion

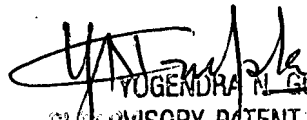
14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
15. Gellert et al. (U S Patent No. 6,270,711) discloses an injection-molding machine which comprises a fixed pin (110) and a collar (62) (See figure 2).
16. Gellert et al. (U S Patent No. 4,917,594) comprises an injection-molding machine which comprises a fixed pin and collar.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dimple N. Bodawala whose telephone number is (571) 272-6455. The examiner can normally be reached on Monday - Friday at 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Yogendra N. Gupta can be reached on (571) 272-1316. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DNB


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